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CONCERNING A FILING UNDER 35 U.S.C. 371

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U.S. APPLICATION NO. (If known, see 37 CFR 1.5)

09/857466

INTERNATIONAL APPLICATION NO.
PCT/CA99/01168

INTERNATIONAL FILING DATE
7 December 1999 (07.12.99)

PRIORITY DATE CLAIMED
7 December 1998 (07.12.98)

TITLE OF INVENTION

Method and apparatus for providing a computerised television apparatus

APPLICANT(S) FOR DO/EO/US

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Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. ☐ This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.
4. ☒ The US has been elected by the expiration of 19 months from the priority date (Article 31).
5. ☐ A copy of the International Application as filed (35 U.S.C. 371(c)(2))
 - a. ☐ is attached hereto (required only if not communicated by the International Bureau).
 - b. ☒ has been communicated by the International Bureau.
 - c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).
6. ☐ An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).
 - a. ☐ is attached hereto.
 - b. ☐ has been previously submitted under 35 U.S.C. 154(d)(4).
7. ☐ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))
 - a. ☐ are attached hereto (required only if not communicated by the International Bureau).
 - b. ☐ have been communicated by the International Bureau.
 - c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
 - d. ☐ have not been made and will not be made.
8. ☐ An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371 (c)(3)).
9. ☐ An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).
10. ☐ An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

Items 11 to 20 below concern document(s) or information included:

11. ☐ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
12. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
13. ☐ A FIRST preliminary amendment.
14. ☐ A SECOND or SUBSEQUENT preliminary amendment.
15. ☐ A substitute specification.
16. ☐ A change of power of attorney and/or address letter.
17. ☐ A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 35 U.S.C. 1.821 - 1.825.
18. ☐ A second copy of the published international application under 35 U.S.C. 154(d)(4).
19. ☐ A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).
20. ☐ Other items or information:

09/857466

U.S. APPLICATION NO. 09/857466 INTERNATIONAL APPLICATION NO. PCT/CA99/01168		ATTORNEY'S DOCKET NUMBER 07045-001-US-01	
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21. <input checked="" type="checkbox"/> The following fees are submitted: BASIC NATIONAL FEE (37 CFR 1.492 (a) (1) - (5)): Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO \$1000.00 International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO \$860.00 International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO \$710.00 International preliminary examination fee (37 CFR 1.482) paid to USPTO but all claims did not satisfy provisions of PCT Article 33(1)-(4) \$690.00 International preliminary examination fee (37 CFR 1.482) paid to USPTO and all claims satisfied provisions of PCT Article 33(1)-(4) \$100.00 ENTER APPROPRIATE BASIC FEE AMOUNT =				CALCULATIONS PTO USE ONLY	
Surcharge of \$130.00 for furnishing the oath or declaration later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(e)).					
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE	\$	
Total claims	20 - 20 =	0	x \$18.00	\$	0
Independent claims	2 - 3 =	0	x \$80.00	\$	0
MULTIPLE DEPENDENT CLAIM(S) (if applicable) ---			+ \$270.00	\$	0
TOTAL OF ABOVE CALCULATIONS =				\$	0
<input checked="" type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by 1/2.				+	\$ 355.00
SUBTOTAL =				\$	1215.00
Processing fee of \$130.00 for furnishing the English translation later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(f)).				\$	---
TOTAL NATIONAL FEE =				\$	1215.00
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property +				\$	---
TOTAL FEES ENCLOSED =				\$	1215.00
				Amount to be refunded:	\$
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a. ☐ A check in the amount of \$ _____ to cover the above fees is enclosed.

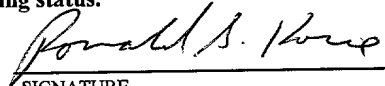
b. ☒ Please charge my Deposit Account No. 02-3980 in the amount of \$ 1215.00 to cover the above fees.
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NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137 (a) or (b)) must be filed and granted to restore the application to pending status.

SEND ALL CORRESPONDENCE TO:


 SIGNATURE
Ronald S. Kosie
 NAME
Reg. no. 28,814
 REGISTRATION NUMBER

09557466-091601

PTO/PCT Rec'd 95 JUN 2001

Title: Method and Apparatus for Providing a
Computerised Television Apparatus

5 Field of the invention

This invention relates to a method and an apparatus for use in providing electronic communication. It is particularly applicable to systems and methods for use in
10 visual communication, audio communication and telecommunications, such as may be used in the field of television and computer networks.

15 Background of the Invention

It is known in the art to use a computer to display a television signal while maintaining the functionality of the computing apparatus. Similarly, it is also known in the art to use a television apparatus to access computer networks such
20 as Intranets and the Internet.

A common approach using a computing apparatus is providing a television signal processor card adapted to receive a television signal. The television signal processor
25 card, herein referred to as a TV adapter card, is operative to process a television signal received at an input for display on a monitor of the computing apparatus. This type of card is described in U.S. Patent Number 5,192,999 whose contents are hereby incorporated by reference. Typically, the TV adapter
30 card is inserted into a slot of the casing enclosing the computing apparatus.

A deficiency in the above-noted system is a poor display image. Typical computing apparatus monitors use a dot pitch approximate to 0.28 mm of dimension, while standard television monitors use a dot pitch of about 0.93 mm. 5 Frequently, the resulting display image is diffuse and lacks brilliance.

Another deficiency in systems of the type described above is a lengthy initiation process for the computing apparatus. 10 Indeed, such systems, before being operative to display a television signal on the monitor, require an operating system to be activated by the apparatus. Typical systems make use of a BIOS to boot. A typical BIOS, on power up searches the computing apparatus to identify its hardware elements. This 15 generally includes identifying which processor is being used in the computing apparatus, what is the bus architecture, what are the peripherals, what is the memory that is available amongst others. Once the hardware elements have been identified, program elements such as drivers are invoked. 20 Such an activation process typically requires in excess of a minute to complete, which may be aggravating to the user of the system. An additional deficiency with the use of a TV adapter card in the computing apparatus relates to memory fragmentation. Typically, the television signal requires 25 intensive processing by the computing apparatus' central processing unit, as well as requires the use of memory units in the computing apparatus. Typically, the use of the computing apparatus to display television images causes the memory to become increasingly fragmented. This often causes 30 the computing apparatus to become inoperable requiring the computing apparatus to be restarted.

Another commonly used solution is to provide an adapter commonly referred to as set top box, operative to be coupled to a conventional television apparatus. Such set top boxes allow an interface between computer type information data elements, such as Web pages, and a television apparatus to be established. Functionally, a set top box is operative to receive a signal indicative of data in a form suitable for processing by computing apparatus and map this data into a display signal suitable for display by a conventional television. A typical 21-inch screen television has a dot pitch approximate to 0.93 mm. Such top boxes are well known in the art to which this invention pertains and will not be described further.

A deficiency of the above-described set top box in combination with a conventional television apparatus is that the dot pitch of .93 mm for a 21 inch screen does not provide sufficient precision for the display of images indicative of letters commonly found in computer displays. Consequently, the display image is blurry and lacks precision often to the point of being aggravating for the user to read.

Another deficiency with the use of a conventional television screen is the lack of resolution of the conventional television screen, in particular for the display of Web pages. Typical Web pages are designed to be displayed on computer monitors having standard resolutions of 640 x 480, 800 x 600 or higher. Conventional television screens have lower resolution than the average computer monitor.

Consequently, the display image is in form different of that intended by the image creator.

Consequently, there is a need in the industry to provide
5 a computerized television apparatus capable of providing an improved display image for both a television signal and computer data.

Summary of the Invention

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15 In accordance with a broad aspect, the invention provides a computerized television apparatus comprising a computing device, a video path and a display unit. The computing device is for generating a first display signal. The computing device has an output for releasing the first display signal. The video path comprise a first input coupled to the computing device for receiving the first display signal, a second input for receiving a second display signal derived from a television signal. The video path
20 further comprises an output for releasing a third display signal. The display unit has an input coupled to the output of the video path. The display unit has a given dimension and is operative to display a display image derived from the third display signal. The display unit is characterized in
25 having a dot pitch that is in a range extending from about 0.0008528 times the given dimension to about 0.00125 times the given dimension.

Advantageously, by providing a display unit characterized
30 in having a dot pitch in a range extending from about 0.0008528 times the given dimension to about 0.00125 times the

given dimension, a improved display image suitable for both a television signal and computer data is obtained.

In a specific example of implementation, the second display signal bypasses the computing device.

Advantageously, by having the second display signal bypass the computing device, intensive processing of a television derived signal is avoided thereby avoiding memory fragmentation in the computing device.

Preferably but not essentially, the computerized television apparatus comprises a first coupling member adapted to receive a television signal, the first coupling member being coupled to the second input of the video path. The computerized television apparatus further comprises a second coupling member coupled to the computing device, the second coupling member being adapted to receive a signal indicative of information data elements, the information data elements being suitable for use by the computing device.

In accordance with another aspect, the invention provides a computerized television apparatus comprising a fast boot-up computing device for generating a display signal. The fast boot-up computing device has an output for releasing the display signal and includes a plurality of hardware elements. The fast boot-up computing device comprises an initial program loader unit comprising a data structure including a plurality of data elements associated to respective hardware elements. The fast boot-up computing device further comprises a plurality of program elements associated to respective

hardware elements, the program elements being adapted to cooperate with selected ones of the hardware elements. The fast boot-up computing device is operative to process the initial program loader unit to invoke the program elements
5 associated to the respective data elements and is operative to boot-up the computerized television apparatus.

10 An advantage of providing a fast boot-up computing device comprising an initial program loader unit is that, when the computerized television apparatus is powered-on, the booting process occurs by scanning the data elements in the initial program loader unit and invoking the program element associated to each respective data element. This removes the requirement for the computing device to search for the
15 hardware elements thereby reducing the boot time.

For the purpose of this specification, the expression "display signal" is used to designate an electric or electronic representation of an image suitable to be displayed
20 by a display unit such as a cathode ray tube or any other suitable display device. In specific example, the display signal is an analog signal in an RGB format.

Other aspects and features of the present invention will
25 become apparent to those ordinarily skilled in the art upon review of the following description of specific embodiments of the invention in conjunction with the accompanying figures.

30 Brief Description of the Drawings

Fig. 1 shows a high-level block diagram of a computerized television apparatus in accordance with the spirit of the invention;

Fig. 2 shows a detailed block diagram of the display unit
5 depicted in figure 1;

Figure 3 shows a specific example of the video path depicted
in figure 1;

Figure 4 show a block diagram of a computing device in
accordance with an embodiment of the invention;

10 Figure 5 shows a block diagram of an alternative embodiment of
the video path depicted in figure 1;

Figure 6 shows a detailed block diagram of a computerized
television apparatus in accordance with the spirit of the
invention.

Detailed Description

In a first form of implementation, as shown in figure 1,
the invention provides a computerized television apparatus 2
20 comprising a computing device 104, a video path 106 and a
display unit 102. The video path 106 receives a first display
signal from the computing device 104 at a first input 110 and
a second display signal at a second input 108. In a specific
example of implementation, the second display signal bypasses
25 the computing device 104. The video path releases a third
display signal at an output 140 for use by the display unit
102 for generating a display image.

The display unit 102 has an input coupled to the output
30 140 of the video path 106. The display unit 102 is operative

for displaying a display image derived from the third display signal. In a specific example of implementation, the display unit 102 is a cathode ray tube. The display unit 102 has a given dimension and is characterized in having a dot pitch in
5 a range from about 0.0008528 times the given dimension to about 0.00125 times the given dimension. A specific example of the display unit is shown in detail in figure 2 of the drawings. The display unit 102 comprises a display surface 250, a cathode ray tube gun controller unit 202 and a
10 deflection controller 19. The display surface 250 has a given dimension. For a specific substantially rectangular display surface, the given dimension is a diagonal measurement 252 of the display surface. The display surface 250, cathode ray tube gun controller unit 202 and deflection controller 19 are
15 adapted to generate a dot pitch in an range from about 0.0008528 times the given dimension to about 0.00125 times the given dimension. Cathode ray tube gun controller units and deflection controllers are well known in the art to which this invention pertains and will not be described further.

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The computing device 104 is operative to generate a first display signal and has an output for releasing the first display signal. A specific example of the computing device 104 is shown in detail in figure 4 of the drawings. The
25 computing device 104 comprises a central processor 4 and a memory unit coupled to the central processor 4. In a first form of implementation, the central processor is a general-purpose digital processor adapted to execute instructions defined by a program element. In this first form of
30 implementation, the memory unit comprises at least one program element suitable to be executed by the central processor 4.

More specifically, the memory unit may be partitioned into a data memory unit 6 and a program memory unit 8 where the data memory stores data elements for use by the central processor 4 and the program memory 8 stores programs for use by the central processor 4. In a specific example, the program element is operative for generating a display signal indicative of a web page when executing on the central processor 4. In a second form of implementation, the central processor is a task specific processor adapted to implement a specific processing operation on a given input data stream. In this second form of implementation, the memory unit comprises data elements suitable to be processed by the central processor 4. This second form of implementation is not as flexible as the first form. This will become apparent in light of a specific example. To modify the central processor implemented in accordance with the first form to introduce new functionality, all that is required is to modify the program memory 8. This can be achieved by providing the computing device 104 with an external communication port, such as a disk drive, network connection or interface device, thereby allowing to store the new program element in the program memory. In the second form of implementation where the central processor is a task specific processor, the central processor 4 would have to be replaced by a new central processor implementing the new functionality.

The program element executing on the central processor 4 is operative to generate data elements indicative of a display signal. The data elements representative of a display signal may further comprise control information allowing the central processor and an external device to communicate. The data

elements indicative of a first display signal are released by the central processor 4.

The video path 106 has a first input 110 coupled to the
5 computing device 104 for receiving the first display signal.
The video path further comprises a second input 108 for
receiving a second display signal derived from a television
signal. The video path further comprises an output 140 for
releasing a third display signal. The person skilled in the
10 art will readily appreciate that the video path may comprise
in excess of the two inputs without detracting from the
spirit of the invention. In a first specific example of
implementation, the video path comprises a display controller
operative to selectively enable the transmission of either
15 one of the first display signal received at the first input
110 and the second display signal received at the second input
108. The selection by the video path of first display signal
or the second display signal may be effected by a control
signal received from a third input to the video path.
20 Continuing with this first specific example, the third
display signal released at the output 140 is indicative of a
display signal selected from the group consisting of the
first display signal and the second display signal. In a
second specific example of implementation, as illustrated in
25 figure 3, the video path comprises a central processor 300
and a memory unit 302. The central processor 300 is
operative to process the first display signal and the second
display signal to derive the third display signal, the third
display signal being indicative of a display signal that is a
30 combination of the first display signal and the second
display signal. The memory unit 302 comprises at least one

program element suitable to be executed on the central processor 300 for allowing the central processor 300 to process the signals received at the first and second inputs of the video path. For example, the memory unit may contain

5 a program element allowing the simultaneous display of the first display signal and the second display signal on the display unit 102 using picture-in-picture techniques. The memory unit may contain any suitable image-processing program without detracting from the spirit of the invention. Figure

10 5 shows a functional block diagram in accordance with a third specific example of implementation of the video path 106. In this third specific example, the video path comprises a display controller 12 coupled to a video memory unit 14. The display controller has a first input coupled to the first

15 input 110 of the video path for receiving a first display signal and a second input coupled to the second input 108 of the video path for receiving a second signal derived from a television signal. The display controller is operative to release a display signal and a control signal to the output

20 of the video path 140. In a specific example, the control signal is used to control the deflection controller 19 of the display unit 102. Alternatively, the display controller 12 comprises an active processing component for processing the input display signals 108 110 and releasing a display signal

25 that is a combination of the two signals such as by using picture-in-picture techniques or other image processing techniques for generating visual artifacts. The functional blocks depicted in figure 5 may be implemented on a general purpose computing apparatus comprising a CPU and a memory

30 unit or by dedicated hardware units programmed to implement a desired functionality. As a variant, the video path further

comprises a video mixer 16 coupled to the output of the display controller 12. The video mixer has a second input for receiving an external display signal in a format suitable for transmission to the display unit. The video mixer is
5 operative to generate an output display signal. In a specific example, the video mixer comprises a switch for selectively releasing either one of the signals received from the output of the display controller 12 and from the second input receiving the external display signal.

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Preferably but not essentially, the computerized television apparatus further comprises a first coupling member 130 and a second coupling member 132. The first coupling member 130 is adapted to receive a television signal and is
15 operatively coupled to the second 108 input of the video path 106. The second coupling member 132 is operatively coupled to the computing device 104. The second coupling member 132 is adapted to receive a signal indicative of information data elements, the information data elements being suitable for use
20 by the computing device 104. In a first specific example of implementation, the second coupling member 132 includes an Ethernet controller unit allowing the computerized television apparatus 2 to be interconnected to a data source via a computer network. In a second specific example of
25 implementation, the second coupling member includes a modem unit allowing the computerized television apparatus 2 to be interconnected to a data source via the telephone network. In yet another specific example, the first coupling member 130 comprises a tuner device and an analog to digital converter
30 operative for processing an analog signal received at the input of the first coupling member 130 to derive a digital

representation of the signal image. The computerized television apparatus may comprise additional coupling members allowing signal exchanges between the apparatus 2 and an external signal source to take place without detracting from the spirit of the invention.

Figure 5 shows a specific implementation of the computerized television apparatus 2. Apparatus 2 comprises a computing device comprised of a central processor (CPU) 4 which is conventionally connected to a memory unit 6, such as a RAM, and to a readable program memory 8. The apparatus further comprises a user interface unit 10 such as a keyboard, a mouse, a remote control or any other suitable device for allowing a user of the apparatus 2 to interact with the computing device. In a specific example, the interface unit 10 comprises devices peripheral to the apparatus 2 such as wireless devices allowing remotely controlling apparatus 2.

CPU 4 is linked to the video path by a coupling to the display controller 12. The display controller is coupled to a suitable temporary video memory unit 14. The display controller 12 is coupled to a first coupling member via an analog to digital converter 22. The display controller is further coupled to the video mixer 16. The video mixer 16 is coupled to a display unit such as a screen 18 to allow a visual display for the user.

Continuing with the same specific implementation, the apparatus 2 provides a first coupling member in the form of a television coupling 750. In a specific form, the first

coupling member is a tuner 20 providing a coupling between the apparatus 2 and an analog signal, the analog signal including an analog image component and an audio component. The tuner 20 is operative to extract the analog image component from a received input signal for transmission to an analog to digital converter 22. The analog to digital converter receives the analog image component and releases a digital representation of the latter, referred to as the digital image component. The digital image component is then released for processing by the display controller 12. The analog to digital converter may be further coupled to the CPU 4 for exchanging control signaling information and, optionally, for transmitting display image information for processing by the CPU 4. The tuner 20 also transmits the audio component of the input signal to an audio controller 24 linked to an amplifier and speakers combination 26 which allows sound output for the user. Audio controllers are well known in the art to which this invention pertains and will not be described in further detail. The person skilled in the art will readily observe that the tuner 20 may also be used to receive radio frequency waves, for emission through speakers 26 as conventional radio sound waves.

In a first form, the second coupling member is an Ethernet controller 28 adapted to be linked to a local computer network system by means of a suitable connector 30. In a second form, the second coupling member is a modem device 32, adapted to be linked through a suitable connector 34 to the telephone network. The Ethernet controller 28 and the modem device 32 may be particularly useful for receiving data elements from

remote locations, such as WebPages from the worldwide web, thus allowing Internet browsing.

The apparatus 2 further comprises a controlled power input 36 to feed the components of the apparatus 2. The controlled power input 36 can be selectively activated/disactivated by the user of the apparatus 2.

It can be seen that with apparatus 2, a number of different functions can be accomplished. Indeed, the RAM and program memories 6, 8, together with CPU 4, control peripheral devices 10, and video elements 12, 14, 16, 18, 19 allow the user of the apparatus 2 to perform a wide variety of computer related operations. More specifically, the computer related operations are accomplished, at least on part, on a basis of data obtained through the local network via a second coupling member. The video mixer 16 allows selectively displaying an external display signal in a format suitable for processing by a display unit and a signal received from the display controller. The display controller 12 allows subdividing a display image into a number of different images ("picture-in-picture"), some of which may be television programs originating from a first coupling member, while simultaneously visualizing network or internet files. The software required for the apparatus 2 operation is located on program memory 8.

In accordance with a variant, the computing device 104 for generating a display signal is a fast boot-up computing device. The fast boot-up computing device includes a plurality of hardware elements. The fast boot-up computing device further comprises an initial program loader unit

comprising a data structure including a plurality of data elements associated to respective hardware elements. The fast boot-up computing device further comprises a plurality of program elements associated to respective hardware elements, the program elements being adapted to cooperate with selected ones of the hardware elements. The fast boot-up computing device is operative to process the initial program loader unit to invoke the program elements associated to the respective data elements and is operative to boot-up the computerized television apparatus. In a specific example, the boot-up of the computerized television apparatus comprises the initialization of the various BIOS, the operating system, the graphic interface and the television driver. The boot-up is effected on the basis of the initial program loader in about five (5) seconds or less.

In a specific example of implementation, the program elements are operative to implement a communication interface with their associated hardware element. In a specific example of implementation, the hardware elements are selected from the set consisting of processors, peripheral devices and memory devices. In a specific example, the program elements are stored in the program memory 8. The initial program loader unit may comprise data elements of the type: "Pentium II 300Hz; ISA bus; LogitechTM serial mouse; 64 MB RAM . . ." and so on. Each data element is in turn associated to a respective program element. For example, a program element associated to the data element "LogitechTM serial mouse" may be the driver program element for the components associated to the data element "LogitechTM serial mouse". Continuing the same specific example, upon power-up, the CPU 4 scans the data

elements in the initial program loader unit and invokes the associated program elements.

Advantageously, the use of the initial program loader
5 unit removes the requirement to search the computerized
television apparatus at power-on thereby reducing the overall
booting time of the computerized television apparatus.

Although the present invention has been described in
10 considerable detail with reference to certain preferred
embodiments thereof, variations and refinements are possible
without departing from the spirit of the invention.
Therefore, the scope of the invention should be limited only
by the appended claims and their equivalents.

Claims:

5 1. A computerized television apparatus comprising:

- a computing device for generating a first display signal, said computing device having an output for releasing said first display signal;
- a video path having
 - 10 a) a first input coupled to said computing device for receiving the first display signal;
 - b) a second input for receiving a second display signal derived from a television signal;
 - c) an output for releasing a third display signal;
- 15 - a display unit having an input coupled to the output of said video path, said display unit being operative for displaying a display image derived from said third display signal, said display unit having a given dimension, said display unit being characterized in
- 20 having a dot pitch in an range from about 0.0008528 times the given dimension to about 0.00125 times the given dimension.

2. A computerized television apparatus as defined in claim 1,
25 wherein said second display signal bypasses said computing device.

3. A computerized television apparatus as defined in claim 2,
said computerized television apparatus further comprising:

- a first coupling member adapted to receive a television signal, said first coupling member being coupled to the second input of said video path;
- a second coupling member coupled to said computing device, said second coupling member being adapted to receive a signal indicative of information data elements, said information data elements being suitable for use by said computing device.

10 4. A computerized television apparatus as defined in claim 3,
wherein said second coupling member includes an Ethernet
controller unit.

15 5. A computerized television apparatus as defined in claim 3,
wherein said second coupling member includes a modem unit.

20 6. A computerized television apparatus as defined in claim 2,
wherein said display unit comprises a display surface, said
given dimension being a measurement of the display surface.

25 7. A computerized television apparatus as defined in claim 4,
wherein the display surface is substantially rectangular,
said given dimension being a diagonal measurement of the
display surface.

30 8. A computerized television apparatus as defined in claim 1,
wherein said video path comprises a display controller,
said third display signal being indicative of a display
signal selected from the group consisting of the first
display signal and the second display signal.

9. A computerized television apparatus as defined in claim 1, wherein said video path comprises a switch, wherein said switch is a video mixer.

5 10. A computerized television apparatus as defined in claim 1, wherein said video path comprises a processing unit, said processing unit being operative to process the first display signal and the second display signal to derive the third display signal, the third display signal being
10 indicative of a display signal that is a combination of the first display signal and the second display signal.

11. A computerized television apparatus as defined in claim 1, wherein said computing device comprises:

- 15
- a central processor;
 - a memory unit coupled to said central processor, said memory unit comprising at least one program element suitable to be executed by said central processor.

20 12. A computerized television apparatus as defined in claim 8, wherein said program element is operative for generating a display signal indicative of a web page when executing on said central processor.

25 13. A computerized television apparatus as defined in claim 1, wherein said display unit comprises a cathode ray tube.

14. A computerized television apparatus comprising a fast boot-up computing device for generating a display signal, said
30 fast boot-up computing device having an output for

releasing said display signal, said fast boot-up computing device including:

- a plurality of hardware elements;
- an initial program loader unit comprising a data structure including a plurality of data elements associated to respective hardware elements;
- a plurality of program elements associated to respective hardware elements, said program elements being adapted to cooperate with selected ones of the hardware elements;

said fast boot-up computing device being operative to process the initial program loader unit to invoke the program elements associated to the respective data elements, said fast boot-up computing device being operative to boot-up said computerized television apparatus.

15.A computerized television apparatus as defined in claim 14, wherein said plurality of hardware elements form part of a hardware platform, said fast boot-up computing device being operative to boot-up computerized television apparatus without searching said hardware platform.

16.A computerized television apparatus as defined in claim 14, wherein said plurality of data elements is pre-determined.

17.A computerized television apparatus as defined in claim 14, wherein at least one hardware element is selected from the set consisting of a processor, a peripheral device and a memory device.

18.A computerized television apparatus as defined in claim 14, wherein said display signal is a first display signal, said computerized television apparatus further comprising:

- a video path having
 - a) a first input coupled to said computing device for receiving the first display signal;
 - b) a second input for receiving a second display signal derived from a television signal;
 - c) an output for releasing a third display signal;
- a display unit having an input coupled to the output of said video path, said display unit being operative for displaying a display image derived from said third display signal.

19.A computerized television apparatus as defined in claim 18, wherein at least one of said data elements is indicative of a part coupled to said computing device.

20.A computerized television apparatus as defined in claim 18, wherein said display unit has a given dimension and is characterized in having a dot pitch in an range from about 0.0008528 times the given dimension to about 0.00125 times the given dimension.

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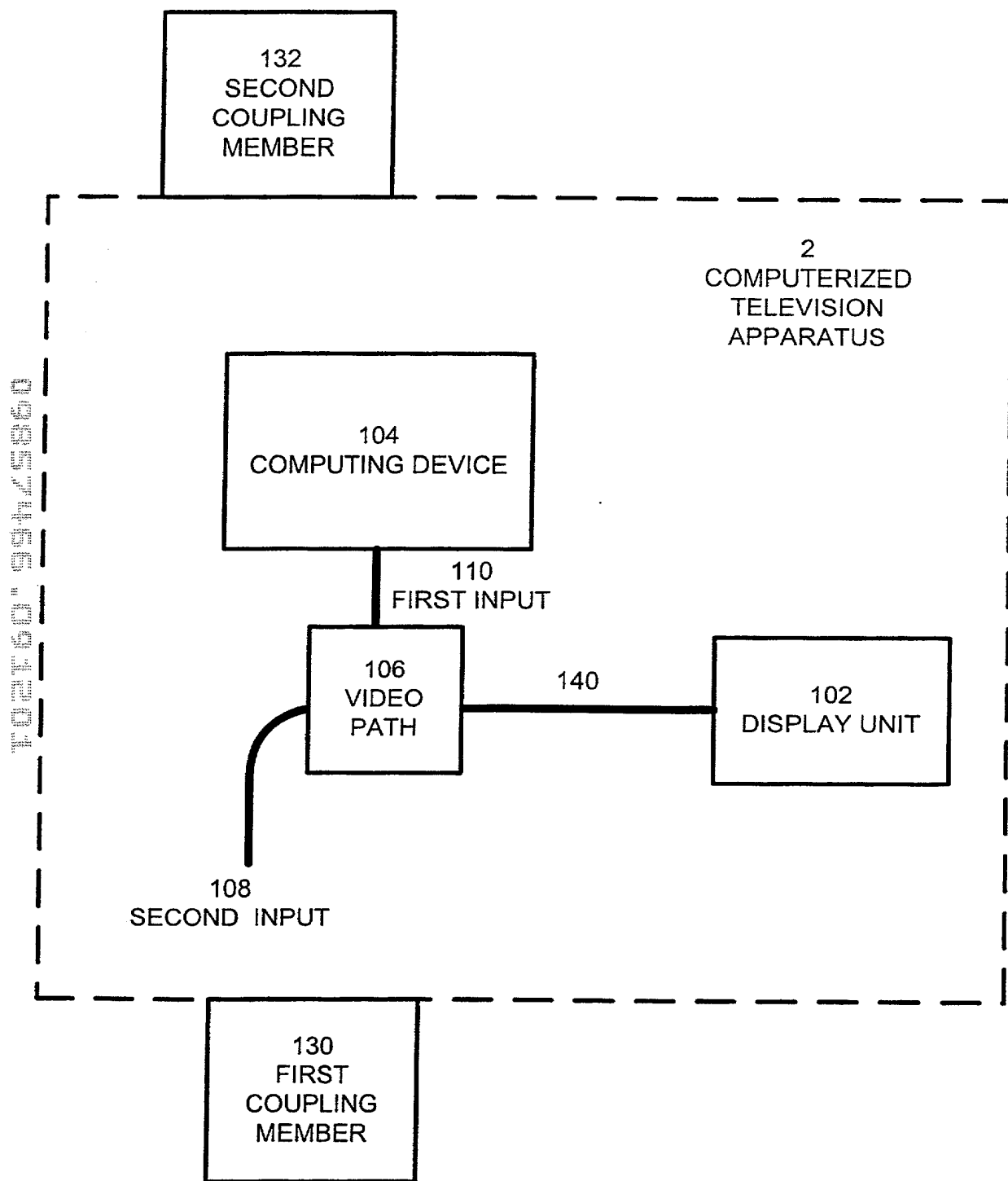


Figure 1

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FROM VIDEO PATH 106

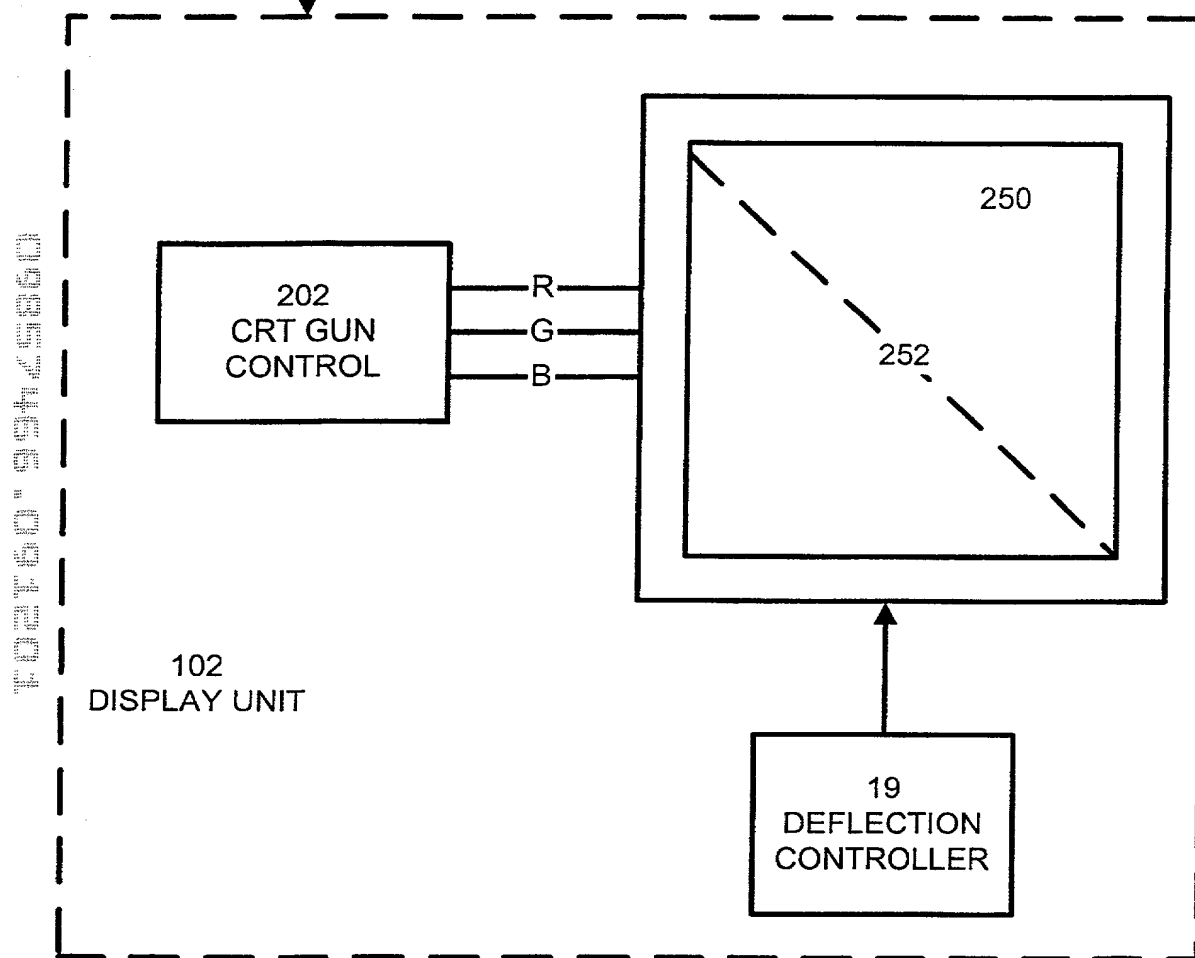


Fig. 2

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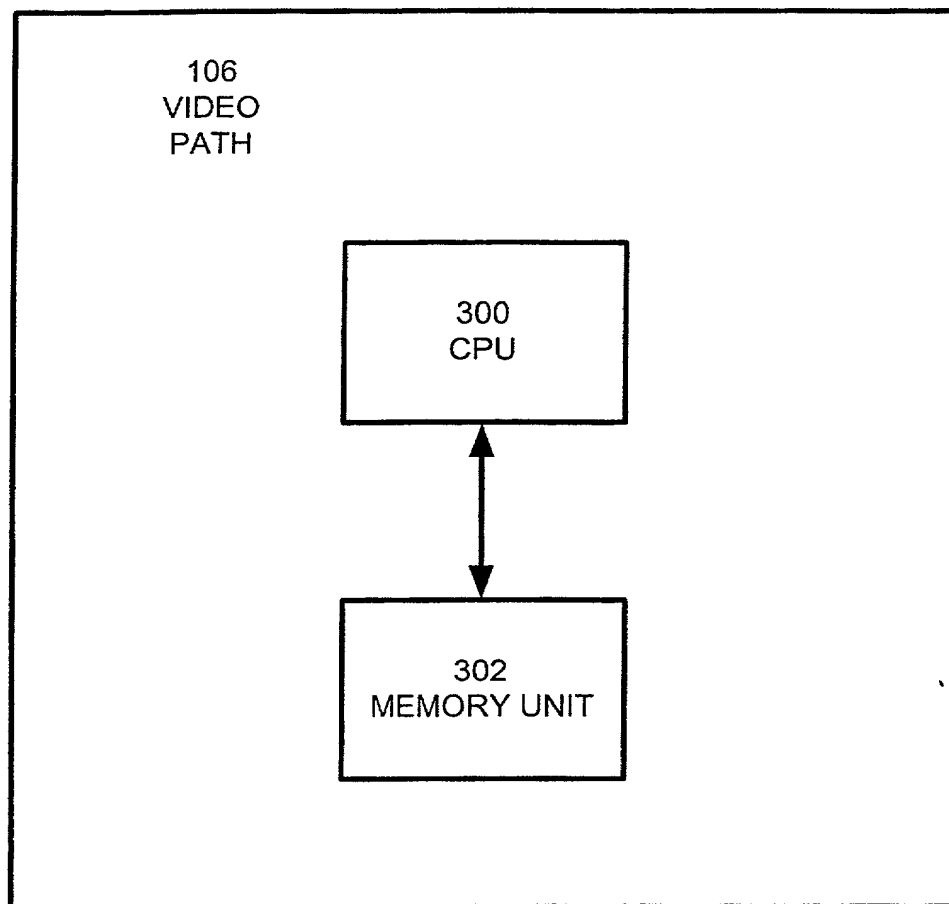


Fig. 3

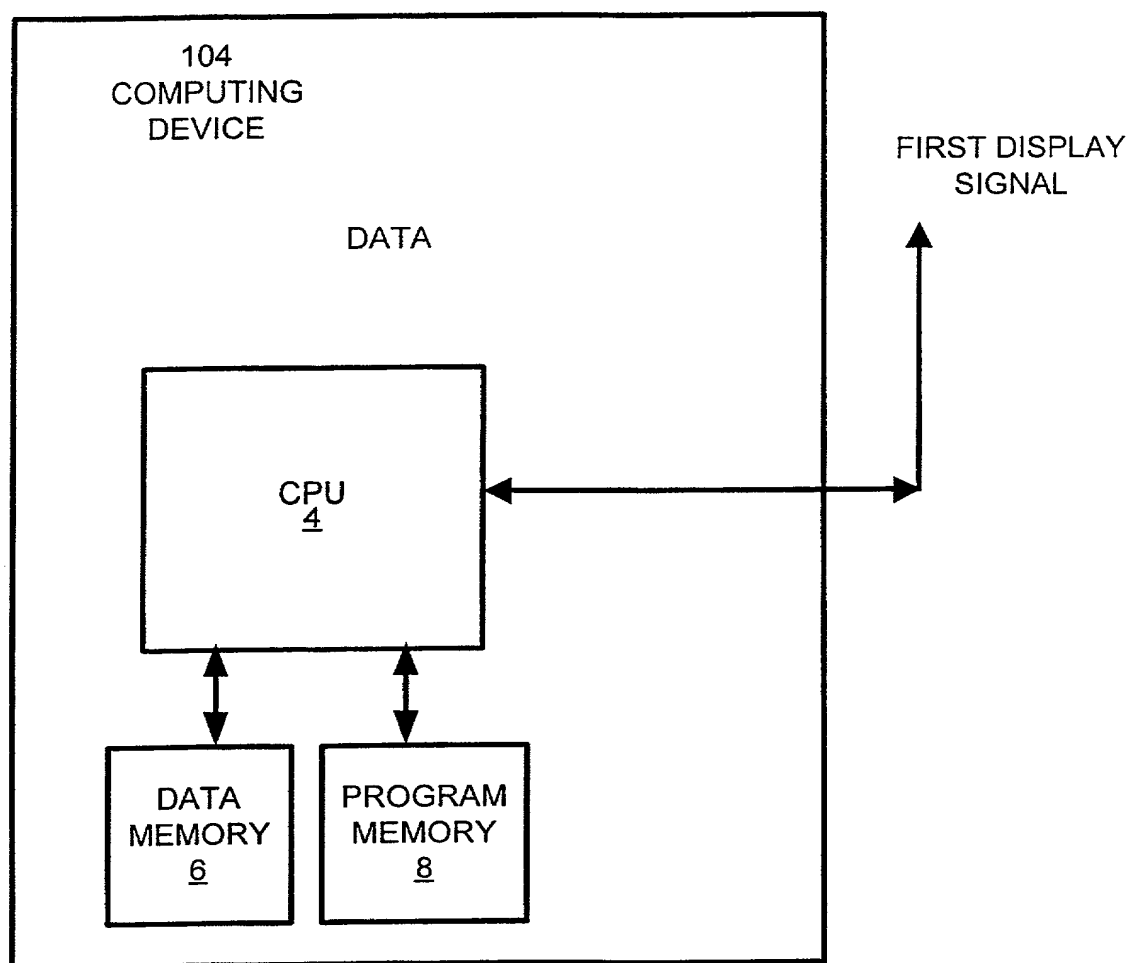


Fig. 4

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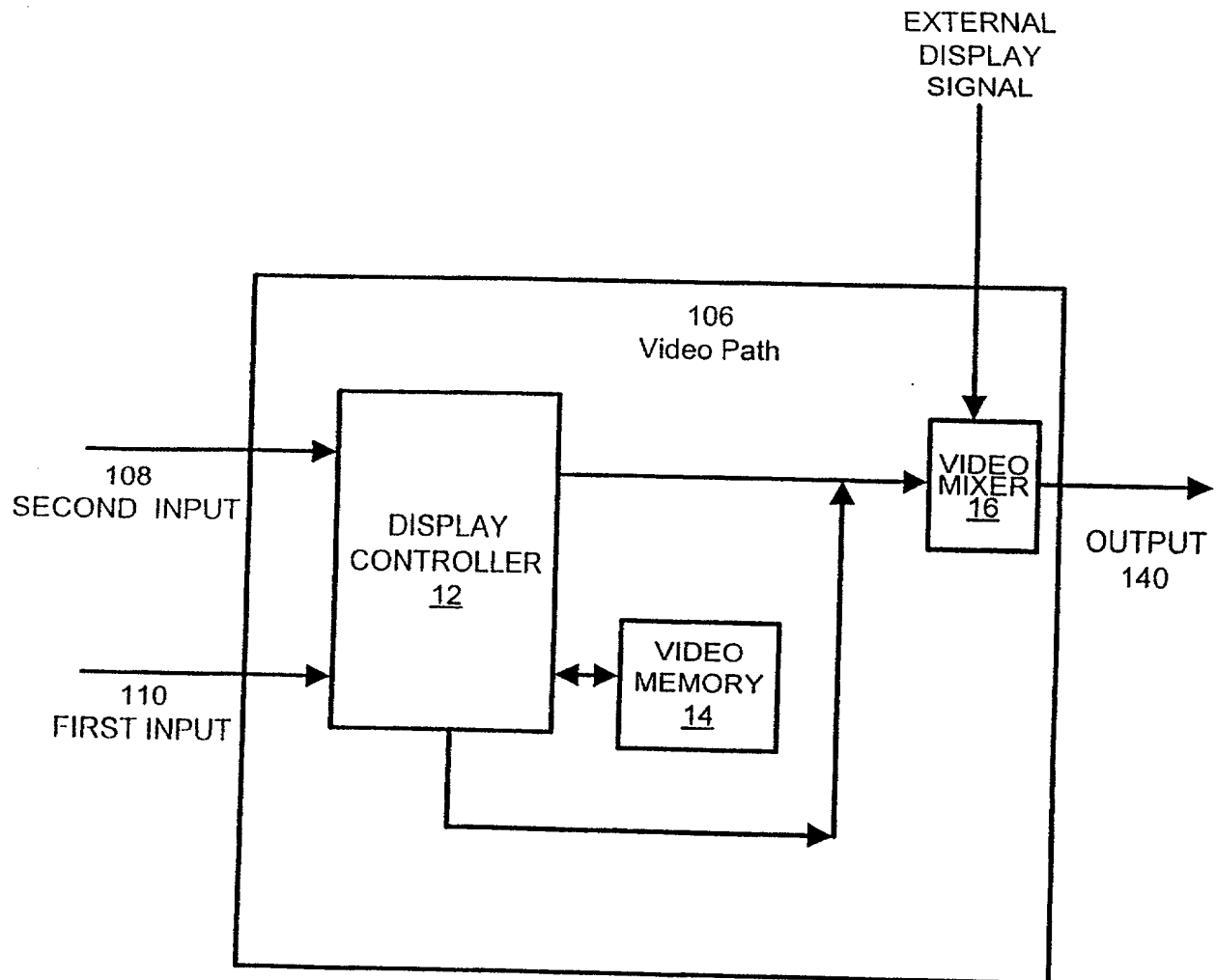


Fig. 5

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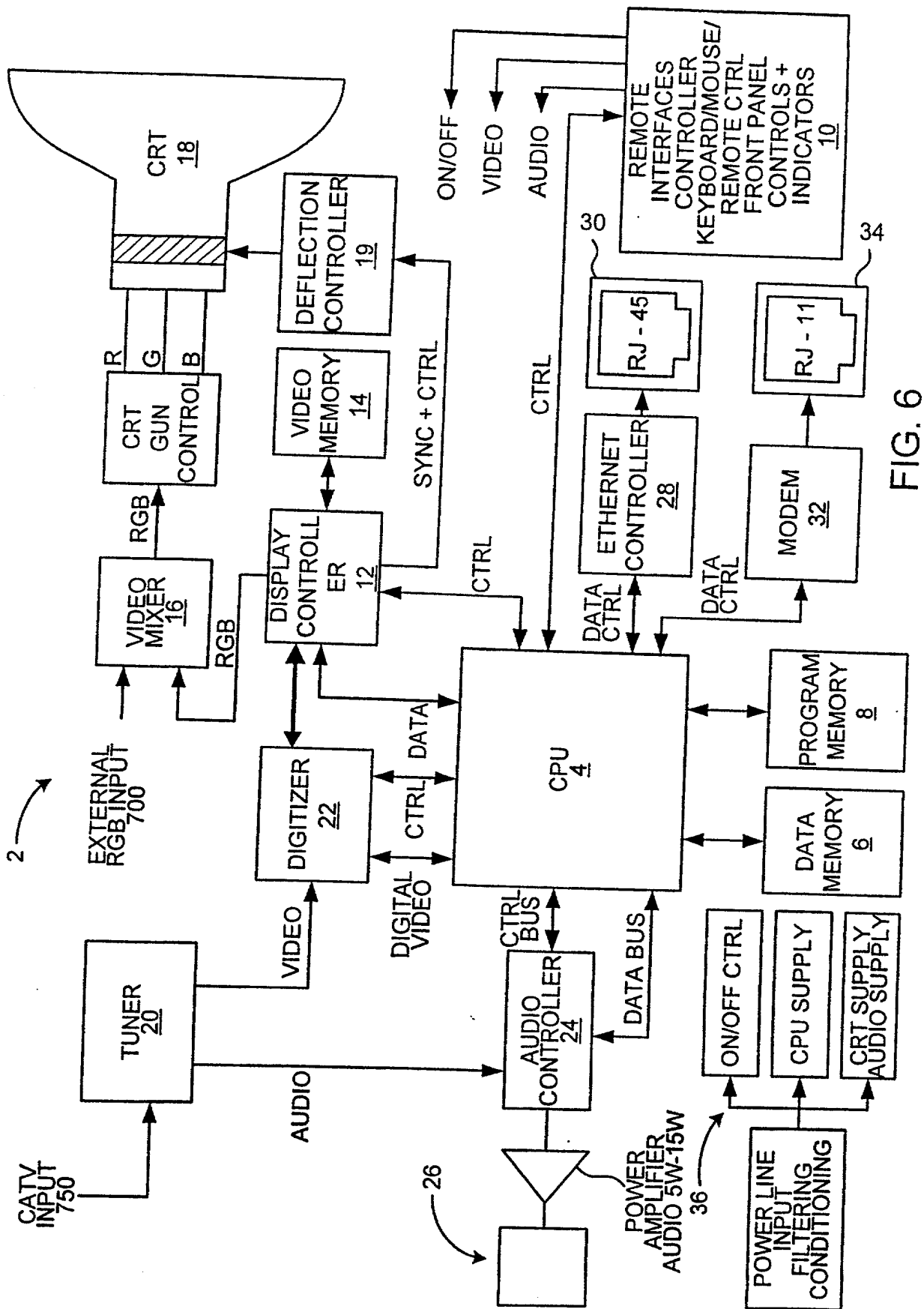


FIG. 6

**DECLARATION FOR PATENT APPLICATION
AND APPOINTMENT OF ATTORNEY**

As a below named inventor, I hereby declare that my residence, post office address and citizenship are as stated below next to my name; I believe that I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention (Design, if applicable) entitled:

**METHOD AND APPARATUS FOR PROVIDING
A COMPUTERISED TELEVISION APPARATUS**

the specification of which (check one):

☐ is attached hereto

☒ was filed on: December 7, 1999 as Application Serial No.: 09/857,466
and (if applicable) was amended on:

☐ was filed on: _____ as International Application (PCT) No.: _____
and (if applicable) was amended on: _____

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment(s) referred to above. I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, §1.56. I hereby claim foreign priority benefits under Title 35, United States Code §119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed.

PRIOR FOREIGN APPLICATION(S)			PRIORITY CLAIMED	
Number	Country	Day/Month/Year filed	Yes	No
60/111,274	United States	07/12/1988	x	

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) or PCT international application(s) designating the United States of America listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in that/those prior application(s) in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, §1.56 which became available between the filing date of the prior application(s) and the national or PCT international filing date of this application:

Application number	Filing date	Status- Patented, Pending or Abandoned

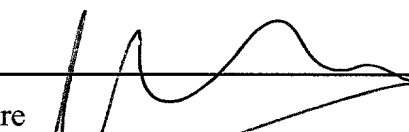
I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

POWER OF ATTORNEY: I (We) hereby appoint as my (our) attorneys, with full powers of substitution and revocation, to prosecute this application and transact all business in the Patent and Trademark Office connected therewith: Ronald S. Kosie, Reg. No. 28,814; Robert Brouillette, Reg. No. 31,930 and Nicolas Pellemans, Reg. No. 38,797.

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Date <u>21 Mar 2001</u>	Signature <i>André Dussault</i>

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<p>Date 6 SEPT 2001</p>	<p>Signature </p>

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